Benchmarking Rates and Financial Health in Arizona

David Tucker
Project Director

Lexi Kay
Marketing and Outreach Coordinator

Environmental Finance Center at UNC Chapel Hill
http://efc.sog.unc.edu

October 31, 2013 Webinar
Dedicated to enhancing the ability of governments and other organizations to provide environmental programs and services in fair, effective and financially sustainable ways.

How you pay for it matters!
Water Infrastructure Finance Authority of Arizona

- Arizona’s water and wastewater funding source

- Affordable and efficient financing available year-round
  - Loans: planning, design, improvement, construction, acquisition
  - Grants: planning and design phases

**Mission:** Maintain and improve water quality by providing financial and technical assistance for water infrastructure throughout Arizona.
Who is RFC?

• Focused on rate, financial, & management consulting for water, sewer, & stormwater utilities
• 40+ utility financial/management consultants
• Experience conducting projects for 500+ utilities across the country
• Leadership in industry associations
• Author of industry manuals and national and state rate surveys
• SEC/MSRB Registered Municipal Advisor
Smart Management for Small Water Systems
under a Cooperative Agreement with the US EPA

- The EFCN provides training and technical assistance to small public water systems in all fifty states and five territories to help local water systems achieve and maintain compliance with the Safe Drinking Water Act.
- Workshops, trainings and direct assistance:
  - Asset Management
  - Water Loss Reduction
  - Water System Collaboration
  - Fiscal Planning and Rate Setting
  - Energy Management
  - Funding Coordination, and
  - Managerial and Financial Leadership
- Sign up for direct assistance at http://efcnetwork.org/one-on-one/
Happy Halloween!
Objectives

• Become familiar with the features and benefits of our Arizona water and wastewater rates dashboard
• Learn how to compare one water systems' rates with those of other systems
• Learn how to apply several useful financial benchmarks to your system(s).
Geographic representation: All Registrants
Poll Question 1
Rates in Arizona

2012 Water and Wastewater Residential Rate Survey for the State of Arizona

• Conducted for the Water Infrastructure Finance Authority of Arizona by Raftelis Financial Consultants, Inc.

• 139 utilities (2012 responses only)
  – 324 utilities (2009-2012 responses)

• 14 water and 14 sewer survey questions

• Municipalities, Associations, Districts/Counties, and Investor-Owned

• Self-reported data
Median Monthly Drinking Water Bills (5 kgal) (by number of people served) (2012 responders) (n=127)
Median Monthly Wastewater Bills (5 kgal) (by number of people served) (2012 responders) (n=50)

- Fewer than 1,000: $33.00
- Between 1,000 and 5,000: $28.64
- Between 5,000 and 10,000: $22.29
- More than 10,000: $24.89
Drinking Water Utility Ownership Type

Utility Type for All Drinking Water Rate Structures for 2012 Responses (n=129)

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association</td>
<td>7.8%</td>
<td>10</td>
</tr>
<tr>
<td>District</td>
<td>13.2%</td>
<td>17</td>
</tr>
<tr>
<td>Investor-Owned</td>
<td>51.2%</td>
<td>66</td>
</tr>
<tr>
<td>Municipality</td>
<td>27.9%</td>
<td>36</td>
</tr>
</tbody>
</table>
Drinking Water Rates in Arizona

Residential Water Rate Structures for 2012 Respondents (n=129)

- **Uniform Rate**: 26.4%, n=34
- **Increasing Block**: 73.6%, n=95

Data analyzed by the University of North Carolina Environmental Finance Center using self-reported survey results by Raftelis Financial Consultants, Inc., and the Water Infrastructure Finance Authority of Arizona.
Put Them Together…

Drinking Water Rate Structures Utilized by Utility Type for 2012 Responses (n=129)

- Association: 80% Uniform Rate, 20% Increasing Block
- District: 47% Uniform Rate, 53% Increasing Block
- Investor-Owned: 26% Uniform Rate, 74% Increasing Block
- Municipality: 17% Uniform Rate, 83% Increasing Block
Wastewater Utility Ownership Type

Utility Type for All Wastewater Rate Structures for 2012 Responses (n=50)

- Municipality: 72.0%
- Investor-Owned: 16.0%
- District: 12.0%
- Association: 0.0%

<table>
<thead>
<tr>
<th>Ownership Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality</td>
<td>36</td>
</tr>
<tr>
<td>Investor-Owned</td>
<td>8</td>
</tr>
<tr>
<td>District</td>
<td>6</td>
</tr>
<tr>
<td>Association</td>
<td>0</td>
</tr>
</tbody>
</table>
Wastewater Rates in Arizona

Residential Sewer Rate Structures for 2012 Respondents (n=50)

- Uniform Rate: 36.0% (n=18)
- Flat Fee (Non-Volumetric): 62.0% (n=31)
- Increasing Block: 2.0% (n=1)

Data analyzed by the University of North Carolina Environmental Finance Center using self-reported survey results by Raftelis Financial Consultants, Inc., and the Water Infrastructure Finance Authority of Arizona.
Put Them Together…

Wastewater Rate Structures Utilized by Utility Type for 2012 Responses (n=50)

- District: 33% Uniform Rate, 67% Flat Fee
- Investor-Owned: 25% Uniform Rate, 75% Flat Fee
- Municipality: 39% Uniform Rate, 58% Flat Fee

Legend:
- Uniform Rate
- Increasing Block
- Flat Fee (Non-Volumetric)
Base Charges in Arizona

Monthly Base Charge for Residential Customers among 129 Water and 50 Sewer Rate Structures for 2012 Responders

- Drinking Water Utilities
- Wastewater Utilities
## Median Drinking Water and Wastewater Monthly Bills at 5,000 Gallons per Month by Utility Type

<table>
<thead>
<tr>
<th>Utility Type</th>
<th>Drinking Water Rate Structures</th>
<th>Wastewater Rate Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Rate Structures</td>
<td>Median 5,000 Gallon per Month Bill</td>
</tr>
<tr>
<td>Association</td>
<td>10</td>
<td>$35.12</td>
</tr>
<tr>
<td>District</td>
<td>17</td>
<td>$34.50</td>
</tr>
<tr>
<td>Investor-Owned</td>
<td>66</td>
<td>$31.74</td>
</tr>
<tr>
<td>Municipality</td>
<td>36</td>
<td>$23.36</td>
</tr>
<tr>
<td>All Utilities</td>
<td>129</td>
<td>$29.99</td>
</tr>
</tbody>
</table>
Monthly Equivalent Residential Drinking Water Bills by Consumption for 129 Rate Structures (2012 Responders)

Data analyzed by the University of North Carolina Environmental Finance Center using self-reported survey results by Raftelis Financial Consultants, Inc., and the Water Infrastructure Finance Authority of Arizona.
Arizona Water & Sewer Bill Marginal Price for Consumption Reduction
10,000 - 5,000 Gallons per Month as Percent vs. Absolute Decrease (2012 Responders) (n=151)

Data analyzed by the University of North Carolina Environmental Finance Center using self-reported survey results by Raftelis Financial Consultants, Inc., and the Water Infrastructure Finance Authority of Arizona. Combined water and sewer bills used when utility offers both services; otherwise water-only or sewer-only bills are used.
Arizona Water & Sewer Bill Pricing Signal (2012 Responders) (n=40)
Marginal Price Decrease from 10,000 - 5,000 Gallons per Month as Percent

Data analyzed by the University of North Carolina Environmental Finance Center using self-reported survey results by Raftelis Financial Consultants, Inc., and the Water Infrastructure Finance Authority of Arizona. Only utilities who offer both drinking water and wastewater services are included.
Rates in Arizona

Check out our Arizona Rates Dashboard

• On the EFC Website
  • Go to http://efc.sog.unc.edu and search for “Arizona Water and Wastewater Rates Dashboard”
Benchmarking Rates
Everyone needs safe drinking water!
News Flash - All

Low Water and Sewer Rates
January 8, 2007

Once again, the City of [BLANK] Water Department proved to have some of the lowest water and sewage rates in the state. A recent statewide comparison was conducted among 63 water providers to evaluate the rates residents pay for their water and sewage on a monthly basis. The City of [BLANK] is proud to say, based on 7,000 gallons, the average monthly usage per household, the City has the third lowest water and sewage rates statewide, with an average water bill of $15.38, and sewage bill of $10.36. As a result, [BLANK] proved to have the third lowest combined residential water and sewage rates, of the 63 polled.
Comparing rates – the old way

Source: NC Triangle J Council of Government
What’s wrong with it?

- Poor sample selection (number, types of systems)
- Comparing only one bill amount
- Comparing nothing besides rates
  - pressure to keep rates low …
  - … regardless of financial condition of utility
  - ignores customers’ ability to pay
  - ignores price signals and utility’s policies
Solution: provide more information?

<table>
<thead>
<tr>
<th>Utility / Rate Structure</th>
<th>Service Population</th>
<th>Billing Period</th>
<th>Base Charge Pricing</th>
<th>Monthly Gallons Provided with Base Charge (Allowance)</th>
<th>Water Rate Structure</th>
<th>Number of Blocks</th>
<th>First Block Maximum (Monthly Gallons)</th>
<th>Implied Rate Structure for Residential Usage (&lt; 15,000 GPM)</th>
<th>Outside/Inside Bill Differential at 5,000 Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>5,455</td>
<td>Bi-monthly</td>
<td>Constant</td>
<td>0</td>
<td>Increasing Block</td>
<td>5</td>
<td>2,500</td>
<td>Uniform Rate</td>
<td>186%</td>
</tr>
<tr>
<td>Ahoskie</td>
<td>4,479</td>
<td>Monthly</td>
<td>Constant</td>
<td>0</td>
<td>Uniform Rate</td>
<td>5</td>
<td>2,500</td>
<td>Uniform Rate</td>
<td>200%</td>
</tr>
<tr>
<td>Alamance</td>
<td>800</td>
<td>Bi-monthly</td>
<td>Constant</td>
<td>0</td>
<td>Uniform Rate</td>
<td>5</td>
<td>2,500</td>
<td>Uniform Rate</td>
<td>200%</td>
</tr>
<tr>
<td>Albermarle</td>
<td>15,042</td>
<td>Monthly</td>
<td>Constant</td>
<td>2,244</td>
<td>Decreasing Block</td>
<td>3</td>
<td>224,000</td>
<td>Uniform Rate</td>
<td>200%</td>
</tr>
<tr>
<td>Alexander County - Bethlehem</td>
<td>10,917</td>
<td>Monthly</td>
<td>By Meter Size</td>
<td>0</td>
<td>Uniform Rate</td>
<td>5</td>
<td>2,500</td>
<td>Uniform Rate</td>
<td>200%</td>
</tr>
</tbody>
</table>

Compare with caution. High rates may be justified and necessary to protect public health.

**Rate Table 2: FY09-10 Monthly-Equivalent RESIDENTIAL WATER Bills at Various Consumption Levels (Includes Base Charges)**

<table>
<thead>
<tr>
<th>Utility / Rate Structure</th>
<th>Service Population</th>
<th>Oper Revenue</th>
<th>Zero Gallons (0 ct)</th>
<th>3,000 Gallons (401 ct)</th>
<th>5,000 Gallons (802 ct)</th>
<th>6,000 Gallons (1,133 ct)</th>
<th>10,000 Gallons (1,337 ct)</th>
<th>15,000 Gallons (2,005 ct)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>5,455</td>
<td>5.00</td>
<td>$5.00</td>
<td>$11.92</td>
<td>$16.82</td>
<td>$29.75</td>
<td>$45.49</td>
<td>$89.98</td>
</tr>
<tr>
<td>Ahoskie</td>
<td>4,479</td>
<td>1.50</td>
<td>$10.00</td>
<td>$20.00</td>
<td>$28.25</td>
<td>$31.90</td>
<td>$46.50</td>
<td>$64.75</td>
</tr>
<tr>
<td>Alamance</td>
<td>800</td>
<td>0.73</td>
<td>$8.50</td>
<td>$19.27</td>
<td>$28.45</td>
<td>$30.04</td>
<td>$44.50</td>
<td>$65.35</td>
</tr>
<tr>
<td>Albermarle</td>
<td>15,042</td>
<td>0.87</td>
<td>$9.49</td>
<td>$14.87</td>
<td>$22.60</td>
<td>$26.23</td>
<td>$35.21</td>
<td>$60.36</td>
</tr>
<tr>
<td>Alexander County - Bethlehem</td>
<td>10,917</td>
<td>1.16</td>
<td>$27.92</td>
<td>$32.09</td>
<td>$34.87</td>
<td>$37.04</td>
<td>$40.09</td>
<td>$60.36</td>
</tr>
<tr>
<td>Alexander County - Sugarloaf and Hwy 16</td>
<td>10,917</td>
<td>1.16</td>
<td>$19.44</td>
<td>$29.66</td>
<td>$36.47</td>
<td>$46.33</td>
<td>7.43</td>
<td>$63.93</td>
</tr>
<tr>
<td>Andrews</td>
<td>375</td>
<td>0.81</td>
<td>$10.00</td>
<td>$19.00</td>
<td>$30.50</td>
<td>$36.13</td>
<td>$42.00</td>
<td>$52.50</td>
</tr>
<tr>
<td>Ayden</td>
<td>11,300</td>
<td>1.11</td>
<td>$12.00</td>
<td>$22.00</td>
<td>$27.35</td>
<td>$33.75</td>
<td>$38.25</td>
<td>$48.25</td>
</tr>
<tr>
<td>Bailey</td>
<td>562</td>
<td>0.58</td>
<td>$11.50</td>
<td>$22.00</td>
<td>$32.25</td>
<td>$33.50</td>
<td>$33.50</td>
<td>$42.50</td>
</tr>
<tr>
<td>Beaufort</td>
<td>2,085</td>
<td>1.28</td>
<td>$17.67</td>
<td>$32.64</td>
<td>$48.27</td>
<td>$48.27</td>
<td>$48.27</td>
<td>$48.27</td>
</tr>
<tr>
<td>Beaufort County - District</td>
<td>375</td>
<td>0.81</td>
<td>$10.00</td>
<td>$19.00</td>
<td>$30.50</td>
<td>$36.13</td>
<td>$42.00</td>
<td>$52.50</td>
</tr>
<tr>
<td>Beaufort County - District</td>
<td>6,720</td>
<td>1.17</td>
<td>$13.65</td>
<td>$13.85</td>
<td>$21.29</td>
<td>$25.11</td>
<td>$40.39</td>
<td>$58.43</td>
</tr>
</tbody>
</table>

185 pages of wonderful tables, full of data you can use!
Rates Dashboards

• Created for AZ, CO, GA, NC, NJ, TX and VA.
• Free, online, open to the public.
• Compares rates against multiple characteristics:
  Utility finances; System characteristics; Customer base socioeconomic conditions; Geography; History
• Compare to similar utilities (large samples):
  – All utilities; similar service population; similar water source; using same rate structure; similar customer income; same type of utility; within 50 miles distance
Demonstrate the AZ Dashboard

http://efc.sog.unc.edu
Some EFCN Resources

Tools, trainings, assistance and resources for small water systems: [www.efcnetwork.org](http://www.efcnetwork.org)

Environmental Finance blog (EFC UNC)
[efc.web.unc.edu/](http://efc.web.unc.edu/)

EFC Boise State University newsletter
[http://efc.boisestate.edu/Publications/tabid/59/Default.aspx](http://efc.boisestate.edu/Publications/tabid/59/Default.aspx)
Poll Questions 2, 3, 4 and 5; and Qualtrics survey link
Thank you!

David Tucker
EFC at University of North Carolina, Chapel Hill
919-966-4199
drtucker@sog.unc.edu

Melanie Ford
Technical Program Supervisor
AZ WIFA
602-364-1321
mford@azwifa.gov

Lexi Kay
EFC at University of North Carolina, Chapel Hill
919-843-3528
akay@sog.unc.edu

Rocky Craley
Senior Consultant
Raftelis Financial Consultants, Inc.
512-687-3409
rcraley@raftelis.com

http://efc.sog.unc.edu